

DEC 10 2009

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PRE-APPEAL BRIEF REQUEST FOR REVIEW Mail Stop AF	Application Number	10/600,571
	Filing Date	June 23, 2003
	First Named Inventor	Masao HORI
	Group Art Unit	3748
	Examiner Name	Tu Minh Nguyen
	Attorney Docket No.	HARA-072-046

Applicant(s) request(s) review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

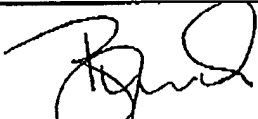
The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

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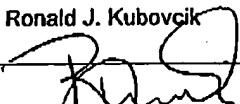
- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
- ☒ attorney of agent of record.
- ☐ attorney of agent acting under 37 CFR 1.34.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

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CERTIFICATE OF MAILING OR TRANSMISSION

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Signature		Date	December 10, 2009

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/600,571 Confirmation No. 9645
Applicant : Masao HORI et al.
Filed : June 23, 2003
TC/A.U. : 3748
Examiner : Tu Minh Nguyen
Dkt. No. : HARA-072-046
Cust. No. : 20374

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Ronald J. Kubovcik

REMARKS ACCOMPANYING
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Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

December 10, 2009

Sir:

This paper includes remarks in support of a Pre-appeal Brief
Request for Review. A Notice of Appeal is being filed concurrently
herewith.

This is an appeal from the decision dated June 10, 2009, of
the primary Examiner finally rejecting claims 17-19, 21-25 and 29
in this application.

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The Invention

The present invention as recited in claim 17 of the present application (as amended in the response filed August 10, 2009) is a process for purifying exhaust gas from a gasoline engine of a fuel-direct-injection type using an exhaust gas purifying catalyst containing a noble metal and a transition metal and which removes hydrocarbons, carbon monoxide and nitrogen oxides from the exhaust gas. The process includes the following steps:

directly injecting gasoline into a cylinder of the gasoline engine of a fuel-direct-injection type to provide a mixture of air and gasoline having an air-fuel ratio of 13 to 15 and combusting the mixture to form an exhaust gas in a first exhaust gas state having an exhaust-gas temperature in a range of 350°C to 800°C at an inlet to the catalyst;

and

directly injecting gasoline into the cylinder of the gasoline engine of a fuel-direct-injection type to provide a mixture of air and gasoline having an air-fuel ratio of more than 15 to 50 and combusting the mixture to form an exhaust gas in a second exhaust gas state having an exhaust-gas temperature in a range of 200°C to 350°C at the inlet to the catalyst.

The exhaust gas in each of the first and second exhaust gas states is contacted with the exhaust gas purifying catalyst (having

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specified properties as defined in claim 17) to catalytically remove hydrocarbons, carbon monoxide and nitrogen oxides from the first and second exhaust gases and purify the exhaust gases.

The Factual and Legal Errors in the Final Rejection

(1) The cited references do not disclose each of the steps of the claimed process.

Kato et al., US 5,402,641 (Kato), cited by the Examiner as disclosing the steps of the process claimed in the present invention does not disclose providing a mixture of air and gasoline having an air-fuel ratio of more than 15 to 50, combusting the mixture to form an exhaust gas in a second exhaust gas state having an exhaust-gas temperature in a range of 200°C to 350°C, and contacting said exhaust gas with an exhaust gas purifying catalyst.

Step 106 of Kato includes A/F ratios of greater than 15, but an exhaust gas temperature within the range of 200°C to 350°C is nowhere disclosed in Kato. The temperature of the exhaust gas with the answer "NO" in step 106 is described only as being less than 550 °C. Nothing in Kato suggests that the exhaust gas temperature in step 106 can be as low as 200°C to 350°C.

(2) The proposed modification of the absorbent of Kato is improper as a matter of law.

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An object of the invention of Katoh is to provide an exhaust gas purification apparatus for an internal combustion engine "installing an NOx absorbent in an engine exhaust conduit wherein the NOx absorbent poisoned by SOx is recovered to a nearly original non-poisoned state by controlling an operation of the engine". (Col. 1, lines 51-54) (Emphasis applicants').

The Examiner takes the position in the Final Action that it would have been obvious at the time the present invention was made "to have utilized the density range of platinum and the inorganic oxide taught by Ozawa et al. in the catalyst of Katoh et al., since the use thereof would have provided a catalyst having high efficiencies in removing HC, CO, and NOx emissions in the exhaust gas." (Final Action, sentence bridging pages 4 and 5) (Emphasis applicants'). I.e., the Examiner's position is that it would have been obvious to replace the NOx absorbent of Katoh with the catalyst for purification of exhaust gases of Ozawa.

However, the invention of Katoh is based on the use of an NOx absorbent. Replacing of the NOx absorbent with a catalyst for purification will destroy the invention on which Katoh is based. An NOx absorbent is not an exhaust gas purifying catalyst. An absorbent absorbs a specific material and emits a material

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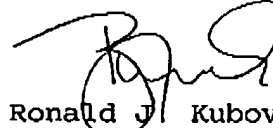
identical to the original material. A catalyst acts on a material and converts the material into a material different from the original material. The Examiner has provided no evidence or reasoning to show that the proposed modification of the NOx absorbent of Katoh would not have been expected to destroy the absorbent properties of the NOx absorbent. In fact, the Examiner characterizes the modified NOx absorbent as a catalyst.

References cannot be combined where the proposed modification would have destroyed the invention on which one of the references is based. *Ex parte Hartmann*, 186 USPQ 366 (BdPatApp&Int 1974).

Therefore, the proposed modification of the NOx absorbent of Katoh is improper as a matter of law.

For the foregoing reasons, the final rejection of the primary Examiner is wrong and should be withdrawn.

Respectfully submitted,
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